Table I. Rates of primary CH per 1,000 live births by race and sex: isolated, multiple, and total, Atlanta, 1979-1992

	Total[a]				Isolated[b]				Multiple[b]	
Race/Sex	**No.**	**Rate**	**RR[c]**	**95% CI[c]**	**No.**	**Rate**	**RR**	**95% CI**	**No.**	**Rate**
White (non-hispanic)										
Male	21	0.15	Referent		16	0.12	Referent		3	0.02
Female	42	0.32	1.4	(1.2-1.6)	39	0.30	1.5	(1.2-1.7)	2	0.02
Total	63	0.23	1.2	(1.1-1.4)	55	0.20	1.2	(1.0-1.4)	5	0.02
Other[d]										
Male	10	0.11	Referent		8	0.09	Referent		2	0.02
Female	14	0.14	1.1	(0.8-1.6)	14	0.14	1.2	(0.9-1.7)	0	0
Total	24	0.13	Referent (total)[e]		22	0.12	Referent (total)		2	0.01
Total										
Male	31	0.13	Referent		24	0.10	Referent		5	0.02
Female	56	0.25	1.3	(1.1-1.5)	53	0.24	1.4	(1.2-1.6)	2	0.01
Total	87	0.19			77	0.17			7	0.02

[a]Three white infants (2 males, 1 female) with Down syndrome were also in the study for a total of 87 infants.

[b]Isolated indicates no major structural defect was present; multiple, a major structural defect was present in addition to primary CH.

[c]RR indicates risk ratio; CI, confidence intervals. RR and CI were not calculated in the multiple group because of small numbers.

Foot notes continued from Table I, page 12.

[d]Other indicates race/ethnicity other than white (18 black, 4 Asian, and 2 hispanic infants).

[e]Referent (total) indicates the referent group when comparing both sexes between the two racial/ethnic groups.

Table II. Rates of primary CH per 1,000 live births by maternal age: isolated, multiple, and total, Atlanta, 1979-1992

	Total				Isolated				Multiple[a]	
	No.	**Rate**	**RR**	**95% CI**	**No.**	**Rate**	**RR**	**95% CI**	**No.**	**Rate**
Maternal Age										
Less than 20 years	14	0.23	2.2	1.0-4.6	14	0.23	2.8	1.2-6.5	0	0
20-24 years[b]	13	0.11	Referent		10	0.08	Referent		2	0.02
25-29 years	29	0.21	1.9	1.0-3.8	26	0.19	2.2	1.1-4.8	3	0.02
30-34 years	21	0.22	2.0	1.0-4.1	20	0.21	2.5	1.2-5.5	1	0.01
35 years and older[b]	10	0.28	2.6	1.1-5.9	7	0.20	2.4	0.9-6.2	1	0.03

[a]RR and CI were not calculated in the multiple group because of small numbers.

[b]Maternal ages of the three infants with Down syndrome in the study were 21, 37, and 37 years.

Table III. Observed and expected number of birth defects among 87 infants with primary CH, Atlanta, 1979-1992

Major Birth Defect	Observed	Expected	O/E[a]	90% CI[a]	P[a]
Structural anomalies[b]	7	3.2	2.2	1.03-4.11	<.05
Down syndrome	3	0.087	34.5	9.40-89.12	<.0001
Total	10	3.3	3.0	1.64-5.14	<.005

[a]O/E indicates observed to expected ratio; CI, confidence intervals; P, Poisson distribution (1-sided).

[b]Seven structural defects include the following: ventriculoseptal defect, sagittal synostosis, clubfoot, lipoma of spermatic cord, cleft lip and palate, posterior urethral valves, situs inversus totalis.

Table IV. Prevalence of major birth defects among infants with primary CH in published studies

Reference	Infants with Primary CH	Infants with Primary CH and MBD[a]	Prevalence (%)	Infants with Cardiac Defects	Prevalence (%)
Present study	87	10	11.5	1	1.1
Cassio et al. (1994)	235	22	9.4	8	3.4
Majeed-Saidan et al. (1993)	25	6 [4][b]	24.0 [16.0]	4 [2]	16.0 [8.0]
Siebner et al. (1992)	243	38 [37]	15.6 [15.2]	14 [13]	5.8 [5.3]
Rosenthal et al. (1988)	100	9 [8]	9.0 [8.0]	3 [2]	3.0 [2.0]
NECHC[c] (1988)	297	22	7.4	7	2.4
Lazarus et al. (1988)	1538	123	8.0	35	2.3
Grant et al. (1988)	493	36	7.3	6	1.2
Fernhoff et al. (1987)	100	23 [17]	23.0 [17.0]	13 [5]	13.0 [5.0]
Chanoine et al. (1986)	41	1	2.4	0	0.0

[a]MBD indicates major birth defects.

[b]Brackets indicate adjusted figures reanalyzing the data (where possible), excluding infants with isolated PDA associated with prematurity.

[c]NECHC indicates New England Congenital Hypothyroidism Collaborative.